

Preliminary Remarks

Applicant requests consideration of the currently pending claims in view of all the art of record in both the parent applications (see MPEP §2001.06(b)) and the present application.

The claims presented herein are allowable over U.S. Patent No. 5,442,637 (Nguyen) and U.S. Patent No. 5,594,490 (Dawson et al.) which were relied upon for the rejections in the Office Action dated July 2, 3003 in the parent application.

As discussed in the background of the invention, there is a distinction between errors caused by network congestion, and errors caused by lossy links (e.g., wireless). Lossy links often suffer from sporadic bit errors which are due to the nature of the link, not congestion in the network. One of the prior art problems is that congestion mechanisms (e.g., reducing the transmission rate) were invoked regardless of the reason for the error. The present invention is related to improving TCP performance by identifying errors which are non-congestion related and handling these errors such that congestion mechanisms are not invoked. The cited art does not make this distinction and does not render the presently presented claims obvious.

Nguyen discloses a technique for processing TCP packets in which control information is not processed for every received TCP packet. Nguyen does not disclose identifying packets having bit errors, and therefore cannot render independent claims 14, 19 and 26 unpatentable because each of these independent claims contains a limitation directed to identifying a received packet having a bit error. The Office Action in the parent application cited Nguyen at col., 5, lines 44 – col. 6, lines 1-58 as disclosing identifying bit errors. However, that portion of Nguyen is directed to dealing with lost packets (see e.g., col. 5, lines 54-58), and nowhere in the cited section is there a disclosure of identifying packets with bit errors. Independent claim 27 contains a similar limitation of “determining a non-congestion bit error” and is patentable over Nguyen for reasons similar to those discussed above.

New independent claim 28 is directed to the steps of transmitting packets and receiving selective acknowledgments indicating that a received packet was identified as having a bit error. Again, claim 28 is patentable over Nguyen because there is no

disclosure in Nguyen of identifying packets as having bit errors and therefore no disclosure of receiving a selective acknowledgment indicating that a received packet was identified as having a bit error.

New independent claim 21 contains the limitations of determining a non-congestion bit error and sending a selective acknowledgment associated with the packet having the non-congestion bit error. Claim 21 is patentable over Nguyen because there is no disclosure in Nguyen of identifying packets as having non-congestion bit errors and no disclosure of sending a selective acknowledgment associated with a packet having a non-congestion bit error. Furthermore, claim 21 contains the additional limitation of “without invoking a congestion control mechanism”. Nguyen does not disclose sending a selective acknowledgement associated with the packet having a non-congestion bit error without invoking a congestion control mechanism.

New independent claim 31 is directed to the steps of transmitting packets and receiving selective acknowledgments associated with a packet having a non-congestion bit error and not invoking a congestion control mechanism. Again, claim 31 is patentable over Nguyen because there is no disclosure in Nguyen of identifying packets as having non-congestion bit errors and therefore no disclosure of receiving a selective acknowledgment associated with a packet having a non-congestion bit error. Furthermore, claim 31 contains the additional limitation of “not invoking a congestion control mechanism” in connection with the received selective acknowledgment. Nguyen does not disclose receiving a selective acknowledgement indicating a non-congestion bit error but not invoking a congestion control mechanism in response to the selective acknowledgment.

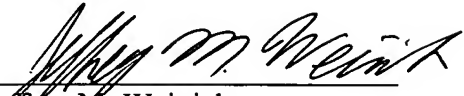
The Office Action in the parent application also cited Dawson et al. in connection with the claims containing limitations relating to the error correction bits in the packet headers. In the currently pending claim set, independent claim 19 contains limitations relating to a packet header containing error correction bits. Dawson et al. does not render claim 19 unpatentable because Dawson et al. is directed to retransmission of data packets upon detection of an error, not correcting the error. Dawson et al. contains no disclosure of the claim 19 limitations of determining whether a bit error occurs within a packet header, and if so, correcting the bit error. The Office Action in the prior application cited

Dawson et al. at col. 10, lines 55+ as disclosing the correction of error packets using FEC in step 45. However, as specified in col. 10, lines 43-55 of Dawson et al., step 45 is a decision making step used in determining whether the re-transmission of packets is to take place over a land-link or satellite. Dawson et al. is directed to re-transmission of data packets, not correction of data packets.

All remaining dependent claims are dependent upon an allowable independent claim and are therefore also allowable.

Allowance of pending claims 14-33 is requested.

Respectfully submitted,



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